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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,171	10/28/2003	Hajime Nakao	Q78168	2745
23373	7590	03/01/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LEE, RIP A	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 03/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,171

Applicant(s)

NAKAO, HAJIME

Examiner

Rip A. Lee

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 1 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action follows a response filed on December 14, 2005. Applicants have amended claim 1 to incorporate the subject matter of claim 7, and claims 11 and 12 to correct matters of form. Claim 7 was canceled. Claims 1-6 and 8-13 remain.

Claim Objections

1. Claim 1 is objected to because of the following informalities: Please replace “which increases the solubility” with “which has increased solubility,” or a phrase with similar meaning. The resin itself does not increase the solubility of some unrecited entity. Appropriate correction is required.
2. Claim 1 is objected to because of the following informalities: In line 9 of the claim, please correct the term “1-adamantyl-1-alkylalkyl.” Appropriate correction is required.
3. Claim 8 is objected to because of the following informalities: Please correct the spelling of “perfluorobutanesuflonic” to “perfluorobutanesulfonic.” Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-6 and 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada *et al.* (U.S. 6,511,787).

Harada *et al.* teaches a positive resist composition comprising polymer C and polymer H prepared in propylene glycol monomethyl ether acetate, PGMEA (Table 2). Both polymers have the requisite alkyladamantyl protecting group. No other solvent is listed in the table.

The invention is not limited to polymers C and H, and various other monomer combinations are contemplated. Thus, one of ordinary skill in the art would have found it obvious to arrive at other resins containing units derived from monomers having an adamantyl protecting group. The inventors state that the solvent is one in which both photoacid generator and decomposing resin is soluble, and among the solvents listed are 3-methoxybutanol and 3-methyl-3-methoxybutanol (col. 16, lines 36-45). Note that these solvents are 3-alkoxyalcohols. Combinations of solvent may also be used (col. 40, lines 39-42). One of ordinary skill in the art practicing the invention of Harada *et al.* would have found it obvious to arrive at the subject matter of the instant claims 1-6, 9, 10 and 13 because the patent teaches that the solvents described above are useful for producing resist compositions of the invention and that combinations are useful as long as dissolution of decomposing resin and photoacid generator is achieved. Accordingly, one of ordinary skill in the art would have found it obvious to arrive at the claimed solvent combination to dissolve materials since it has been held that the discovery of optimum values of result-effective variables in a known process is within the level of ordinary skill in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

The subject matter of the remaining claims is obvious over the teaching of the prior art. Use of nonafluorobutanesulfonates (*i.e.*, perfluorobutanesulfonate) is disclosed in col. 18, line 4. Compositions also include amine-containing compounds to suppress the rate of diffusion of acid generator (col. 20, lines 46+), as well as fluorinated non-ionic surfactants (col. 24, lines 59-67).

Response to Arguments

6. The rejection of claims under 35 U.S.C. 103(a) over Watanabe *et al.* (U.S. 6,818,148) and Tanigawa *et al.* (WO 00/58252) has been overcome by amendment.

Applicant's arguments regarding the rejection of claim 7 (Tanigawa *et al.* in view of Fujimori *et al.*) have been considered fully, and they are not persuasive. Consequently, the rejection has been withdrawn.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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February 25, 2006


DAVID W. WU
SUPERVISORY PATENT EXAMINER
EBC/66V